

# Perkin-Elmer Display Terminals



The Owl and the Pussycat shown here may lack a "beautiful pea green boat," but they are not lacking in more practical features. Perkin-Elmer's Owl is a display terminal that offers full editing and format protection. The Pussycat CRT page printer provides a printed copy of the data displayed on the terminal's screen.

## MANAGEMENT SUMMARY

Perkin-Elmer Data Systems currently markets three display terminal models that are available to end users as well as to OEM's and distributors. The Model 1100 and the Model 1200 Owl were introduced in January 1977 as low-cost, Teletype-compatible display terminals. The Model 1100 was originally designated the Fox-1100, but the name has been changed because of trademark problems. The Model 550 Bantam, the newest addition to the Perkin-Elmer family, is a compact unit introduced in November 1978.

All three models feature a 1920-character display screen, the display of upper and lower case alphabets, a transparency mode that displays the full 128-character ASCII character set including control codes, and selectable transmission rates up to 9600 bits/second. A buffered printer interface is optional.

The Model 1100 and the Model 1200 Owl are micro-processor-based and are identical in appearance. The Model 1100 provides scrolling, cursor addressing, a local print feature, and an optional numeric keypad. The Owl provides full editing capabilities, format protection, cursor addressing and sensing, individual cursor control keys, a numeric keypad, 16 optional program function keys, and a concurrent print and receive feature.

The Model 550 Bantam features a keyboard with embedded numeric pad, cursor addressing, switch-selectable white-on-black or black-on-white display, and optional international character sets. The Bantam is a compact unit measuring 15 inches wide, 19 inches deep, and 14 inches high. ➤

Three Teletype-compatible, stand-alone keyboard/display terminals.

All models feature selectable transmission rates of up to 9600 bps, cursor addressing, transparency, scrolling, tabbing, and upper and lower case alphabets. Highlighting features are provided on the Model 1100 and the Model 1200 Owl. The Owl also provides full editing functions and format protection. A buffered printer interface is optional on all models.

The terminals are available for purchase only. End-user prices for the Model 550, Model 1100, and Model 1200 are \$966, \$1,541, and \$2,195, respectively. Quantity discounts are provided for OEM's and distributors.

## CHARACTERISTICS

**VENDOR:** Perkin-Elmer Data Systems, Terminals Division, Route 10 and Emery Avenue, Randolph, New Jersey 07801. Telephone (201) 366-5550.

**DATE OF ANNOUNCEMENT:** Models 1100/1200—January 1977; Model 550—November 1978.

**DATE OF FIRST DELIVERY:** Model 1100—January 1977; Model 1200—March 1977; Model 550—December 1978.

**NUMBER DELIVERED TO DATE:** Over 10,000.

**SERVICED BY:** Perkin-Elmer Data Systems.

## MODELS

The Model 550 Bantam is a compact, fixed logic display terminal with an integral keyboard. Available as an option is an RS-232C "Y-type" printer interface that connects the printer with the main communications line in parallel with the terminal.

The Model 1100 and the Model 1200 Owl, both micro-processor-based, are Teletype-compatible display terminals. Both models are stand-alone units that feature a pedestal-mounted, fixed-position display monitor with an integral keyboard located in the pedestal base. A fully-buffered RS-232C/CCITT V.24 or 20 mA dc printer interface is optional.

## TRANSMISSION SPECIFICATIONS

Transmission on all models is asynchronous in the half- or full-duplex mode. The Model 1100 and the Model 1200 Owl operate at 75, 110, 200, 300, 600, 1200, 1800, 2400, 4800, 7200, or 9600 bits/second. The Model 550 Bantam provides switch-selectable rates of 110, 200, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, and 9600 bits/second. On all models, parity is selectable for odd, even, mark ("1"), or space ("0"). The 10- or 11-unit, 8-level ASCII code is used. The terminals are equipped with an RS-232C/CCITT V.24 interface; a 20 mA current loop interface is optional. The Answerback ➤

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### USER REACTION

In Datapro's 1979 survey of alphanumeric display terminal users, five users reported on their experience with a total of five Model 1100 terminals and seven Model 1200 Owl terminals. The users' ratings are summarized in the following table.

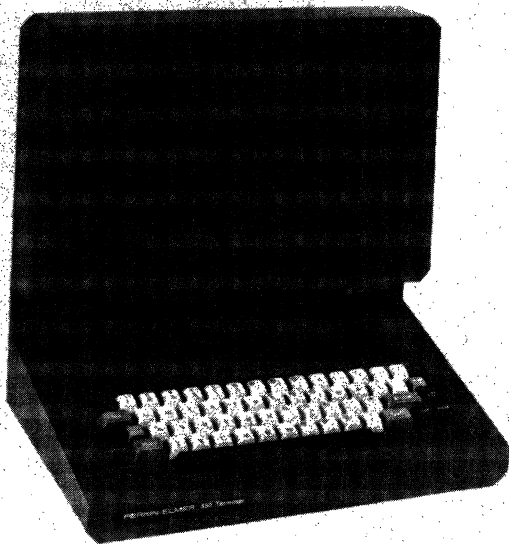
	Excellent	Good	Fair	Poor	WA*
Overall performance	4	1	0	0	3.8
Ease of operation	3	2	0	0	3.6
Display clarity	4	0	1	0	3.6
Keyboard feel & usability	4	1	0	0	3.8
Hardware reliability	3	2	0	0	3.6
Maintenance service	3	1	1	0	3.4
Technical support	2	1	1	1	2.8

\*Weighted Average on a scale of 4.0 for Excellent.

Reported usage of the Perkin-Elmer terminals included structured data entry (1 response), "fill-in-the-blanks" formatted data entry (3 responses) and free-form or text data entry (5 responses). Four of the Model 1200 users were making extensive use of the terminal's editing capabilities.

Three users cited cost as the key advantage of the Perkin-Elmer terminals. Physical size was considered an advantage by one user and a disadvantage by four users. □

▶ option, available for Models 1100 and 1200, stores and transmits a predetermined station identification message of up to 32 characters in response to a keyed "Here Is" or receive WRU code. The Multidrop/Polling option, available for the Model 1200 only, assigns an internally switchable address to each terminal.



The compact Model 550 Bantam is a low-cost unit featuring a keyboard with embedded numeric pad, 11 switch-selectable transmission rates, and switch-selectable white-on-black or black-on-white display.

### DEVICE CONTROL

**MODEL 550 BANTAM:** Data is transmitted on a character-by-character basis. Escape sequences control cursor positioning, cursor addressing, and display clearing. The Line control function places the terminal in the on-line mode to receive or transmit data via the communications lines. In off-line mode, the terminal displays only the data entered at the keyboard.

The Transparent mode displays both data characters and control characters, but does not execute control sequences. In this mode only, the terminal provides automatic carriage return and line feed functions at the end of each line. When the 24th line is filled, displayed data is moved up one line as each new line is entered, causing the first line to scroll off the display.

Additional control functions include Print, which routes data from the communications port to the auxiliary printer port, and Numeric Only, which enables the embedded numeric keypad.

**MODEL 1100:** Transmission is performed on a character-by-character basis as each key is depressed. The cursor is addressable. The cursor can also be positioned via Line Feed, Carriage Return, Space, Backspace, and Tab functions. Both Tab and Backtab functions are provided. Tab stops can be set in any of the 80 columns. The Scroll mode, when enabled, moves all displayed data up by one line as each new line is entered. New Line, when enabled, moves the cursor to the beginning of the next line when a New Line control character is detected. Auto Line Feed, when enabled, causes an automatic line feed with each carriage return.

Transparent mode provides a communications monitoring capability. In this mode, all control character sequences are ignored and all control characters are displayed.

The terminal also provides a local print function; when keyed, the displayed data is printed.

**MODEL 1200 OWL:** Transmission is performed in a block mode. A line, page, or message can be transmitted. The cursor is addressable, and its position can be sensed. Full cursor controls are provided that position the cursor up, down, left, right, or home.

Edit functions provide character or line insertion and deletion, screen erasure, line or field erasure, or erasure of all unprotected fields.

Format protection is standard. Inadvertent entry into protected fields is prevented. Tabbing backward or forward moves the cursor between unprotected fields. Auto Tab Enable moves the cursor to the beginning of the next field when a field is filled. Attribute codes define protected fields, fields designated for numeric entry only, non-displayed fields (for security purposes), and highlighted fields. Highlighting includes half intensity display, blinking, and reverse video. Any combination of attribute codes can define a field. Field Attribute codes can be keyed in the Program mode.

Tab functions include Tab Set and Clear, Tab and Backtab.

Transmit functions can be programmed to transmit all data, transmit all unprotected fields, transmit operator-modified data only, or transmit a Request-to-Send header.

Received commands can request terminal status information including parity or printer error, printer busy, keyboard locked, command error, mode settings (Upper Case

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► Lock, Auto Line Feed, Scroll, Parity definitions, and Send mode), and communication strap settings.

Transparent mode ignores all control code sequences and displays all data including control characters. This mode can be used for program debugging or to transmit control sequences to a device attached to the printer interface.

The local print function prints a line or complete page as selected. In the "Simulprint" mode, displayed data is printed concurrently with the reception of data from the host computer.

The optional Program Function keys transmit a "Request-to-Send" header followed by the "AID" identification code of the depressed key. A total of 32 functions can be program-defined.

Mode Control functions are the same as those for the Model 1100, and include Scroll, New Line, Upper-Case Lock, Auto Line Feed, Break, "Here Is," and Reset.

### COMPONENTS

**MODEL 550 BANTAM CRT DISPLAY UNIT:** A 12-inch (diagonal measurement) CRT, which displays 24 lines of 80 characters each for a total screen capacity of 1920 characters. The character set consists of 128 displayable ASCII symbols, including upper and lower case alphabets, numerics, punctuation, and control characters. Each character is formed by a 5-by-9 dot matrix within a 7-by-10 dot field to allow for lower case descenders. Data is displayed in white on black or black on white. The cursor is displayed in reverse video as a block.

**MODEL 1100/1200 CRT DISPLAY UNIT:** A 12-inch (diagonal measurement) CRT, which displays up to 1920 characters arranged in 24 lines of 80 characters each. The character set features 96 displayable symbols including upper and lower case alphabets, numerics, and specials. A total of 128 ASCII symbols, including symbols that represent the ASCII control codes, are displayed in the Transparency mode. Each character is formed via a 9-by-12 dot matrix to allow for lower-case descenders. An optional 32-character line-drawing set is available for duplicating source forms. Data is displayed in white. Highlighting features include full and half intensity, reverse video, and blinking. The cursor is displayed in reverse video as a block; blinking is optional.

**MODEL 550 BANTAM KEYBOARD:** A data entry-style keyboard with embedded 12-key numeric keypad (including comma and period). Key functions include Line Feed, Carriage Return, Backspace, Tab, Repeat, Clear, Print, Numeric Only, and Upper Case. The keyboard generates all 128 ASCII character codes. Character repeat occurs at a rate of 15 cps when a key is held down. International character sets for French, Swedish, Danish/Norwegian, German, British, and Spanish are optionally available.

**MODEL 1100 KEYBOARD:** A 52-key typewriter-style integral keyboard. The keyboard also features an optional 12-key numeric pad (including comma and period) to the right of the main keygroup and an 8-key Mode keypad to its left. Key functions include Line Feed, Carriage Return, Space, Backspace, Tab, Repeat, Clear, Print, and Multi-code (optional). The Mode Control keypad includes Scroll Enable, New Line Enable, Auto Line Feed, Local, Upper-Case Lock, Break, Reset, and "Here Is" functions.

The keyboard generates all 128 ASCII character codes, and features "Typamatic" action; i.e., character repeat occurs at 15 cps while a key remains depressed.

**MODEL 1200 OWL KEYBOARD:** A 62-key, typewriter-style integral keyboard. The keyboard also features a 12-key numeric pad (including comma and period), a 12-key cursor-control keypad (both located to the right of the main keyboard), an 8-key Mode Control keypad, two optional 8-key clusters of 16 Program Function keys, and an 8-key cluster of Edit control keys. The four 8-key clusters (Mode Control, Program Function, and Edit keys) are located directly over the main keygroup and numeric/cursor control keypads, in sequence from left to right. Key functions of the main keygroup include Line Feed, Carriage Return, Space, Backspace, Tab, Escape, Repeat, Clear, Print, Shift, Shift Lock, and Control Shift. The Mode Control cluster includes Scroll Enable, New Line Enable, Auto Line Feed, Reset, Upper Case Lock, "Here Is", Local, and Break. The Edit cluster includes Character Insert and Delete, Line Insert and Delete, Clear All, Clear Non-Protected, and Clear Line/Field. The keyboard generates any of 128 ASCII character codes, and features "Typamatic" action, i.e. the character is repeated at 15 cps while a key is depressed.

**PRINTER:** The Model 650 Pussycat page printer is designed specifically to provide hard copy output of the data displayed on a CRT screen. The Pussycat is a thermal printer that prints 24 lines of 80 characters each on 8½-by-11-inch paper at a rate of 100 characters/second. The display terminal controls all printer functions. Data received from the terminal is stored in a 1920-character buffer. An additional buffer is available as an option. The Model 650 interfaces with any display terminal equipped with an RS-232C printer port.

The Model 655 Pussycat printer is similar to the Model 650, but is designed to interface with an RS-232C "Y-type" printer interface such as the one available for the Model 550 Bantam terminal. A two-page buffer (3840 characters) is standard.

### PRICING

The Perkin-Elmer display terminals are available for purchase only. A separate maintenance contract and quantity discounts are provided.

P-E Data Systems offers three service plans: Extended Warranty, Full Service, and Fixed Price Depot Repair. Extended Warranty extends the warranty on parts and labor from 90 days to one year; defective terminals are returned to the factory or repair depot for repair. Full service provides on-site maintenance. Fixed Price Depot Repair is intended for customers that provide their own maintenance personnel. Faulty components are returned to the factory, and the customer is billed a fixed charge according to the cost of repair.

Installation charges vary according to the number of terminals installed at the same location. Installation charges are:

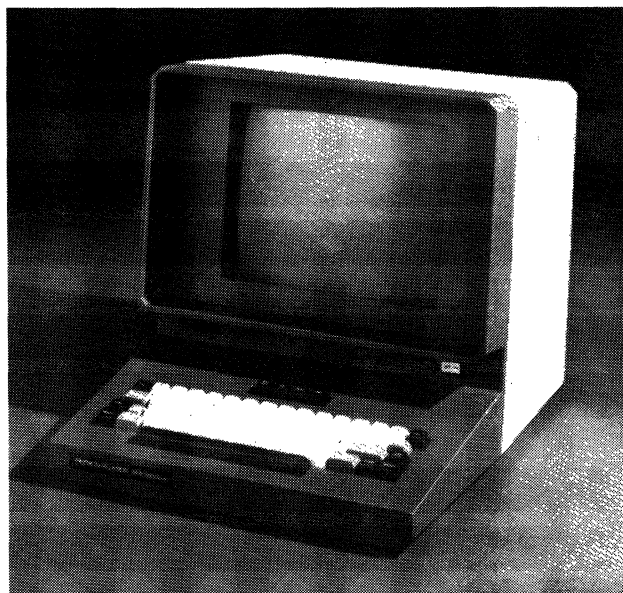
- 1 to 3 terminals—\$75/terminal.
  - 4 to 9 terminals—\$60/terminal.
  - 10 or more terminals—\$40/terminal.
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	<u>End-User Prices</u>	<u>OEM Prices*</u>
Model 550 Bantam	\$ 966	\$ 599
Model 1100	1,541	955
Model 1200 Owl	2,195	1,361
Model 650/655 Pussycat Printer	1,262	782
Thermal paper, 12 300-ft. rolls	69	69
Model 550 Options:		
RS-232C "Y-Type" Printer Interface	80	50
Current Loop Interface	80	50
International character sets	75	46
Model 1100 Options:		
Blinking Cursor	15	15
Multicode	25	25
Answerback	50	50
Numeric Pad	106	66
RS-232C Printer Port	131	66
Current Loop Printer Port	164	86
Current Loop Interface	33	20
Model 1200 Options:		
Blinking Cursor	15	15
Multicode	25	25
Answerback	50	50
Program Function Keys (16 keys)	106	66
Forms Drawing Set	106	66
Microcode for Model 650 Printer Forms Drawing	25	25
RS-232C Printer Port	131	66
Current Loop Printer Port	164	86
Current Loop Interface	33	20
Multi-Drop/Polling	106	66
Model 650 Printer Options:		
Additional 1920-character buffer	150	93
Forms Drawing Set, for use with Model 1200 Owl terminal	65	40

\*For quantities of 100 to 249 units. ■

# Perkin-Elmer Model 550 Bantam Display Terminal



A low-cost, compact, interactive teletypewriter-replacement from Perkin-Elmer. This fixed logic terminal offers standard CRT display features plus an optional printer interface that connects the printer with the main communications line in parallel with the terminal.

## MANAGEMENT SUMMARY

The Model 550 Bantam is Perkin-Elmer's lowest cost, compact, teletype-compatible display terminal. Based on a proprietary LSI CRT controller chip, the Bantam features a keyboard with embedded numeric pad, cursor addressing, switch-selectable white-on-black or black-on-white display, and optional international character sets.

The 12-inch diagonal screen displays up to 1920 characters in 24 data lines of 80 characters each. A full 128-character set of ASCII upper and lower case alphabets are formed by a 7 x 10 dot matrix.

Asynchronous data transmission is performed in the half- or full-duplex mode at selectable speeds ranging from 110 to 9600 bits per second. A selectable transparency mode actually allows the programmer to look into the communications line and see all of the control characters as well as the data characters; thus, assisting communications and program debugging.

Additional Bantam features include absolute and relative cursor control by the host computer, ten tabs across 80 columns of the display, break and numeric mode. The Bantam's silent operation, along with its compact size, 15-inches wide by 9-inches deep and 14-inches high, makes it ideally suited for any environment.

## USER REACTION

Datapro conducted telephone interviews with five users of the Perkin-Elmer Model 550 Bantam Display Terminal ➤

A stand-alone, Teletype-replacement display terminal.

The Model 550 Bantam features silent operation, selectable transmission rates up to 9600 bits per second, host addressable cursor, control character transparency, scrolling, tabbing, and upper and lower case alphabets.

The terminal is available for purchase only at \$966 for the end user. Quantity discounts are provided for OEM and distributors.

## CHARACTERISTICS

**VENDOR:** Perkin-Elmer, Terminals Division, 360 Route 206, Flanders, New Jersey 07836. Telephone (201) 584-1400.

**DATE OF ANNOUNCEMENT:** November 1978.

**DATE OF FIRST DELIVERY:** December 1978.

**NUMBER DELIVERED TO DATE:** Information not available.

**SERVICED BY:** Perkin-Elmer, Terminals Division.

## TRANSMISSION SPECIFICATIONS

Data, which is 8-level ASCII coded, is transmitted in an asynchronous format in the half- or full-duplex mode. The terminal provides selectable speeds of 110, 200, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, and 9600 bits per second. Parity is selectable for odd, even, mark ("1"), or space ("0"). The terminal is equipped with an RS-232-C/CCITT V.24 interface; a 20mA current loop interface is optional.

## DEVICE CONTROL

Data is transmitted on a character-by-character basis. Escape sequences control cursor positioning, cursor addressing, and display clearing. The Line control function places the terminal in the on-line mode to receive or transmit data via the communications lines. In off-line mode, the terminal displays only the data entered from the keyboard.

The Transparent mode displays both data characters and control characters, but does not execute control sequences. In this mode only, the terminal provides automatic carriage return and line feed functions at the end of each line. When the 24th line is filled, additional displayed data is moved up one line as each new line is entered, causing the top line to scroll off the display.

Additional control functions include Print, which routes data from the communications port to the auxiliary printer port, and Numeric Only, which enables the embedded numeric keypad.

## COMPONENTS

**CRT DISPLAY UNIT:** A 12-inch diagonal CRT, which displays 24 data lines of 80 characters each for a total screen ➤

## Perkin-Elmer Model 550 Bantam Display Terminal

➤ during the month of September, 1980. These users, whose names were supplied by the vendor, consisted of the computer centers of three eastern universities, a university located in the central states, and a medical college also located in the central states. Altogether, the five users represented a total of 106 installed units, with experience ranging from five months to fifteen months. Student usage of the terminals as well as administrative usage was indicated. The ratings obtained are as follows:

	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>WA*</u>
Overall performance	1	4	0	0	3.2
Eae of operation	2	3	0	0	3.4
Display clarity	1	3	1	0	3.0
Keyboard feel & usability	2	3	0	0	3.4
Hardware reliability	1	3	1	0	3.0
Maintenance service	2	1	1	0	3.3
Technical support	3	1	0	0	3.5

\*Weighted Average on a scale of 4.0 for Excellent.

One user declined to rate maintenance service, saying that he had not had any need for it in the year the terminals had been in use. Another user did not rate technical support, saying that he had also not required it.

The small size and light weight of the Bantam terminal drew praise from the majority of the respondents. The users seemed to agree that the unit did not take up much space and was easy to move from one location to another. Also drawing praise from more than one user was the reasonable price of the Bantam. The head of one computer center mentioned that the university had made a study of several comparable terminals and had concluded that the Perkin-Elmer unit was "...the best buy for the money." Another user stated flatly that the Model 550 was the "...best thing on the market for the price."

Features such as reverse video, the printer port, the centrally located keypad, and the accessibility of the video controls received favorable comments. Negative comments were made on the lack of a control bell to indicate errors, the absence of a rollover function, and the placement of the switch controlling half- or full-duplex operation. □

➤ **capacity of 1920 characters. The character set consists of 128 displayable ASCII symbols, including upper and lower case alphabets, numerics, punctuation, and control characters. Each character is formed by a 5 x 9 dot matrix within a 7 x 10 dot field to allow for lower case descenders. Data is displayed**

**in white-on-black or black-on-white. The cursor is displayed in reverse video as a block.**

**KEYBOARD: A data entry-style keyboard with embedded 12-key numeric keypad (including comma and period). Key functions include Line Feed, Carriage Return, Backspace, Tab, Repeat, Clear, Print, Numeric Only, and Upper Case. The keyboard generates all 128 ASCII character codes. Character repeat occurs at a rate of 15 cps when a key is held down. International character sets for French, Swedish, Danish/Norwegian, German, British, and Spanish are optionally available.**

**PRINTER INTERFACE: An optional auxiliary output interface port which is located on the rear panel of the terminal used for the connection of a local output device. The port is unidirectional and is intended to interface serial devices adhering to EIA standards. Depressing the latching print key connects serial data from the host computer to the auxiliary output interface port via a "wye" connection.**

### PRICING

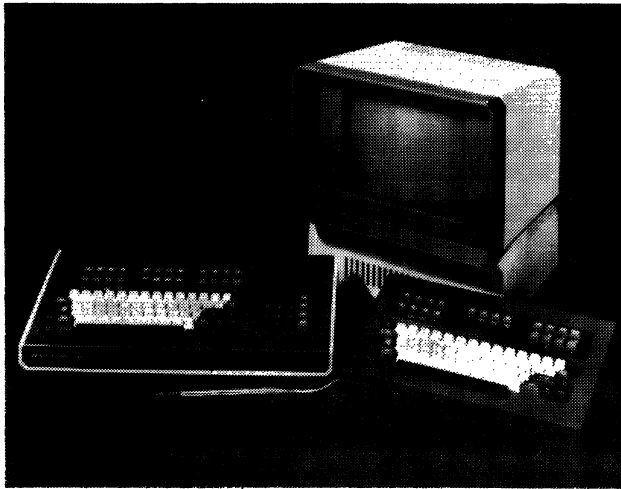
The Model 550 Bantam terminal is available for purchase only. A separate maintenance contract and quantity discounts are provided.

Perkin-Elmer offers three service plans: Extended Warranty, Full Service, and Fixed Price Depot Repair. Extended Warranty extends the warranty on parts and labor from 90 days to one year; defective terminals are returned to the factory or repair depot for repair. Full service provides on-site maintenance. Fixed Price Depot Repair is intended for customers that provide their own maintenance personnel. Faulty components are returned to the factory, and the customer is billed a fixed charge according to the cost of the repair.

Installation charges vary according to the number of terminals installed at the same location. Single quantity prices for the Model 550 are summarized below.

<u>Description</u>	<u>List Price</u>
Model 550 Bantam Interactive CRT	\$ 966
Model 550 Bantam Interactive CRT with universal, switchable 100/115/230V, 50-60Hz power	1055
Antiglare etched tube, grey	30
Antiglare etched tube, green	60
"Wye" printer port	80
Audible alarm	30
20mA Current Loop adapter	80
Cables for RS-232-C port, "wye" printer port, 20mA current loop adapter. Each price separately.	25
International character sets	46 ■

# Perkin-Elmer Super Owl 1251 Display Terminal



Perkin-Elmer's Super Owl 1251 can be configured with either of two detachable keyboards. The standard keyboard consists of 82 keys, including an embedded numeric pad and 12 function keys shiftable to 24. The optional extended keyboard consists of 98 keys, including a dedicated numeric pad and four additional function keys making the total of function keys 16, shiftable to 32. The light pen is optional on both keyboards.

## MANAGEMENT SUMMARY

Perkin-Elmer's announcement of their two newest video display terminals, the Super Owl 1251 and the OEM Owl 1245, comes just three months after the introduction of the Super Owl 1250. The 1250, which has been superseded by the newer models, was the company's initial replacement for their popular Owl 1200 terminal. The Super Owl 1251 offers all of the features of the 1250, but at a lower purchase price. In addition, the 1251 offers increased display clarity (a 9 x 12 character matrix) and improved function compatibility compared to the Owl 1200. The OEM version of the 1251, the 1245, offers some of the 1251's features, such as the printer port, as optional instead of standard.

The Super Owl 1251 consists of a desk-top, white phosphor or optional green or amber phosphor CRT screen and a choice of two detachable keyboards and optional light pen. The unit measures 17 inches high by 15 inches wide by 23 inches deep with the standard keyboard.

The 12-inch diagonal CRT screen displays 24 data lines of 80-characters each. A 25th line allows two-way communications with the host without interfering with the processing of the current transaction.

The detachable keyboard consists of 82 keys including five cursor control keys and 12 function keys shiftable to 24. The function keys give the operator a "one key" way to initiate frequently needed transmissions to the host for calling programs or requesting major functions. ➤

A sophisticated, microprocessor-controlled video display terminal designed to supersede the Owl 1200 and replacing the recently introduced Super Owl 1250.

The Super Owl 1251 offers programmable function keys, the ability to configure the system from the keyboard, choice of two detachable keyboards, optional light pen support, tiltable CRT screen, extensive editing and formatting capabilities, and full- or half-duplex ASCII data transmission at selectable speeds up to 9600 bits per second.

The Super Owl 1251 sells for \$1,895 with the standard keyboard, or for \$1,990 with the extended keyboard. An OEM version of the 1251, the OEM Owl 1245, is also available.

## CHARACTERISTICS

**VENDOR:** Perkin-Elmer, Terminals Division, 360 Route 206 South, Flanders, New Jersey 07836. Telephone (201) 584-1400.

**DATE OF ANNOUNCEMENT:** September 1980.

**DATE OF FIRST DELIVERY:** September 1980.

**NUMBER DELIVERED TO DATE:** 150.

## CONFIGURATION

The Super Owl 1251 is a stand-alone display system consisting of a 12-inch diagonal CRT monitor and a choice of two detachable keyboards. The 1251 can be configured with an optional light pen, either with or without a keyboard.

The operation of the Super Owl is determined by entries (commands) made via the keyboard or by the host computer while in the Configuration Mode. These commands are stored in an EAROM (Electronically Alterable Read-Only Memory).

Almost any serial RS-232-C printer can be connected to the standard printer port of the 1251. The parameters for most printers may be specified via the keyboard, or dynamically on-line by the host, in the configuration mode.

The Super Owl 1251 can perform within a system of polled terminals without physical modification or purchase of options.

## TRANSMISSION SPECIFICATIONS

Asynchronous ASCII transmission in half-, or full-duplex mode is available at switch-selectable speeds of 110, 300, 600, 1200, 2400, 4800 or 9600 bits per second via a standard EIA RS-232-C or optional 20mA current loop interface. Parity is selectable for space, mark, even, or odd. The number of stop bits, treatment of the parity bit and trans- ➤

## Perkin-Elmer Super Owl 1251 Display Terminal

▷ The optional extended keyboard provides a dedicated 12-key numeric pad instead of the standard embedded keypad and adds four more function keys next to the keypad.

Asynchronous ASCII transmission is provided at selectable speeds of 110 to 9600 bits per second in half- or full-duplex mode.

Additional Super Owl 1251 features include:

- Ability to configure the 1251 through its non-volatile EAROM (Electronically Alterable Read Only Memory).
- Descenders on lower case letters for easy reading.
- Full set of video attributes for maximum highlighting.
- Forms drawing character set for depiction of familiar business forms.
- "Request to Send" Block Mode Transmission which eliminates the need to reserve 2KB of host main memory for each CRT.
- Truly programmable function keys which eliminate the host time required to decode the usual fixed-message keys and issue the program calls. The function keys may be reprogrammed by the operator or by the host.
- "Read Modified Only" capability—by line, by message, or by page—reduces host time needed to determine what data the operator entered or changed.
- Control Protection (requires the simultaneous depression of the Control Key) or Lock Out provisions on various groups of keys prevent "accidental" key depressions.
- Self test programs.
- "Read Status" transmission so that the host can detect if the keyboard is locked, optional printer is busy, parity error has occurred, etc.
- "Transparent" debugging mode, in which the 1251 displays all the characters it receives, including control characters. □

▷ mission rate is determined during configuration which may be controlled through the host or via the keyboard.

The 1251 transmits data via Bell modem types 103J, 113D, 212A or equivalent; via an acoustic coupler; or via direct connection to the host using an RS-232-C interface.

Multidrop polling using Perkin-Elmer protocol is standard, with polling characters operator selectable. This requires an external modem splitter for connection of additional terminals. Block mode terminator characters are operator selectable at up to eight each line or page.

### DEVICE CONTROL

The operational functions of the Super Owl 1251 are dependent upon the various modes of operation including Communications Mode, Configuration Mode, Program Mode, Transparent Mode and Edit Mode. Although these modes are mutually exclusive, the 1251 may function within several modes concurrently.

Within the Communications Mode, the Conversational Mode enables the terminal to transmit and receive data character-by-character in the same manner as a teletype. The Block Mode permits a full page of data to be entered in display memory, be edited, and then transmitted to the host. The Request to Send is a special application of Block Mode which allows the system designer to fully optimize the allocation of host time and memory.

In the Local Mode, no data is transmitted or received over the line. The display memory stores and displays all keyed displayable characters.

In the Edit Mode certain Function keys take on the Edit Mode operations upon depression. For example, the operator performs editing functions as well as the following: enters configuration mode, program mode, or transparent mode; places the terminal alternately on-line or off-line; places the 1251 alternately in Block or Conversation Modes; enables or disables the upper case, auto line feed, new line, and scroll feature; performs various clear data functions; and transmits data to a printer.

The operation of the Super Owl 1251 is determined by entries made via the keyboard or the host while the terminal is in the Configuration Mode. Configuration by the host is performed through a series of escape sequences and encoded data transmission. The operator can configure the terminal via the keyboard. A master menu to be followed by the operator is displayed on the screen. The configuration of the 1251 takes into account the Mode Control options, Systems options, Communications options, Keyboard option, Printer Port options, Communication Terminator Definitions, and Function Key Definitions.

The Program Mode enables the programmer to create fields on the display. Forms facsimile can be created by arranging and organizing display data in fields, making data transfer and display easier for the operator. Fields are designated by attribute characters which define the start of the next field and the end of the previous field. The various types of fields include numeric blinking, reverse video, half intensity, protected non-display (security), light pen detectable, or any combination of the above.

The cursor control keys; up, down, left, right, and home are located below the 1251's editing keys.

### COMPONENTS

**CRT DISPLAY:** A 12-inch diagonal CRT which displays up to 1920 characters arranged in 24 data lines of 80 characters each with an additional 25th status line. This display has an etched, anti-glare faceplate and the entire screen has a tilt range of +/-5 degrees from vertical. A full 128 ASCII character set includes control characters which are displayed in the Transparent mode and 31 form drawing graphics. All characters are formed by a 9 x 12 dot matrix. Color of the display is white phosphor with green or amber phosphor available as options. The display console is 17 inches high by 15 inches wide by 14 inches deep (23 inches deep with standard keyboard attached).

**STANDARD KEYBOARD:** A typewriter style keyboard of 82 keys including five cursor control keys and 12 function keys (shiftable to 24). The function keys share 400 bytes



## Perkin-Elmer Super Owl 1251 Display Terminal

of programmable EAROM, and all 12 transmit data, but do not generate characters which are displayed. Four of the 12 keys act as function keys and the remaining eight become editing keys (unshifted) and configuration keys (shifted) in the Edit Mode. A 12-key numeric pad is embedded in the alpha section and is selected by the Numeric Mode key. For repeating strings of characters the 1251 offers a dedicated Repeat Key which operates with no delay and a Typamatic repeat capability which takes effect after one second and repeats at 15 characters per second as long as the key is held down. Fixed groups of keys may be totally locked out by software or interlocked so as to require the simultaneous depression of the "Control Key." The detachable keyboard can be placed up to three feet from the display console.

**EXTENDED KEYBOARD:** A 97-key optional detachable keyboard which is the same layout as the standard keyboard with the exception of a separate dedicated numeric pad and four additional functions keys (shiftable to eight) which are located next to the keypad. These function keys are used as programmable entry to extend the convenience of the pad, for minus, enter, etc. When programmed, these four keys display but do not transmit in block mode; if not programmed, they transmit fixed three-character messages. This keyboard can be equipped with six optional international character sets and a four-position key lock switch.

**LIGHT PEN:** An optional light sensitive pen which is connected to the CRT monitor. Light Pen operation allows an operator to select from various options (menu) shown on the screen and transmit this to the host. The selection and transmission is performed by pointing or pressing the Light

Pen at detectable data fields displayed by the host on the screen.

**PRINTER:** The 1251 is equipped with a buffered unidirectional RS-232-C serial Printer Port. The transmission rates are selectable by the operator independent of communications port transmission rates. Almost any serial RS-232-C printer can be used with the 1251. The Super Owl may also be configured with the Perkin-Elmer Model 650 CRT Page Printer. The 650 is a thermal printer that prints 24 lines of 80 characters each on 8½ by 11-inch paper at a nominal rate of 100 characters per second.

### PRICING

The Super Owl 1251 is available for purchase only. A separate maintenance contract and quantity discounts are provided.

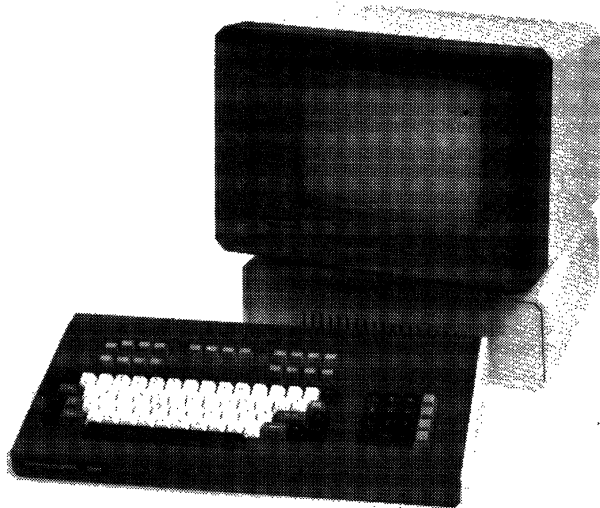
Perkin-Elmer offers three service plans: Extended Warranty, Full Service, and Fixed Price Depot Repair. Extended Warranty extends the warranty on parts and labor from 90 days to one year; defective terminals are returned to the factory or repair depot for repair. Full service provides on-site maintenance. Fixed Price Depot Repair is intended for customers that provide their own maintenance personnel. Faulty components are returned to the factory, and the customer is billed a fixed charge according to the cost of the repair.

Pricing for the OEM Owl 1245 can be obtained by contacting the vendor.

	<u>List Price</u>
Model 1251 Super Owl editing CRT terminal; requires standard or extended keyboard	\$1,600
Standard keyboard with 12 shiftable to 24 function keys	295
Extended keyboard, detachable, with 16 shiftable to 32 function keys	390
Extended keyboard as above, except also including a four-position locking keyswitch	440
Light pen for selecting displayed fields from "menu" and causing transmission to the host	495
RS-232-C cable for modem/computer port or printer port	40
Green phosphor etched antiglare CRT	50
Amber phosphor etched antiglare CRT	50
International character generators; French, Swedish, Danish/Norwegian, German, United Kingdom, or Spanish	100
International keyboard capability	n/c ■



# Perkin-Elmer Super Owl 1250 Display Terminal



Perkin-Elmer's most recent and "wisest" editing video display terminal. The Super Owl 1250 provides the flexibility of programmable function keys, and the convenience of a detachable keyboard and optional lightpen.

## MANAGEMENT SUMMARY

The Super Owl 1250, recently introduced by Perkin-Elmer (Terminals Division), is a sophisticated, microprocessor-driven video display system designed to replace the popular Owl 1200. The Super Owl is particularly valuable for transaction processing in minicomputer environments and has been readily accepted in sophisticated, time-sharing applications making use of the 1250's configuration flexibility and programmable configuration feature.

The Super Owl consists of a desk-top, white phosphor or optional green phosphor CRT screen and a choice of two detachable keyboards. The monitor measures 17 inches high x 15 inches wide x 14 inches deep and the standard keyboard measures 3.25 inches high x 15 inches wide x 9 inches deep.

The 12-inch diagonal CRT screen displays 24 data lines of 80-characters each. A 25th line allows two-way communications with the host without interfering with the processing of the current transaction.

The detachable keyboard consists of 82 keys including five cursor control keys and 12 function keys shiftable to 24. The function keys give the operator a "one key" way to initiate frequently needed transmissions to the host for calling programs or requesting major functions.

The optional extended keyboard provides a dedicated 12-key numeric pad instead of the standard embedded keypad and adds four more function keys next to the keypad. ➤

A sophisticated, microprocessor-controlled video display terminal designed to supersede the Owl 1200.

The Super Owl 1250 offers programmable function keys, the ability to configure the system from the keyboard, choice of two detachable keyboards, tiltable CRT screen, extensive editing and formatting capabilities, and full- or half-duplex ASCII data transmission at selectable speeds up to 9600 bits per second.

The Super Owl CRT terminal sells for \$1,695. The standard or optional extended keyboard sells for \$295 and \$390, respectively. Quantity discounts for OEM's and distributors are available.

## CHARACTERISTICS

**VENDOR:** Perkin-Elmer, Terminals Division, 360 Route 206 South, Flanders, New Jersey 07836. Telephone (201) 584-1400.

**DATE OF ANNOUNCEMENT:** June 1980.

**DATE OF FIRST DELIVERY:** March 1980.

**NUMBER DELIVERED TO DATE:** 1,217.

## CONFIGURATION

The Super Owl 1250 is a stand-alone display system consisting of a 12-inch diagonal CRT monitor and a choice of two detachable keyboards. The 1250 can be configured with an optional light pen, either with or without a keyboard.

The operation of the Super Owl is determined by entries (commands) made via the keyboard or by the host computer while in the Configuration Mode. These commands are stored in an EAROM (Electrically Alterable-Read-Only Memory).

Almost any serial RS-232-C printer can be connected to the standard printer port of the 1250. The parameters for most printers may be specified via keyboard, or dynamically on-line by the host, in the configuration mode.

The Super Owl 1250 can perform within a system of polled terminals without physical modification or purchase of options.

## TRANSMISSION SPECIFICATIONS

Asynchronous ASCII transmission in half-, or full-duplex mode is available at switch-selectable speeds of 110, 300, 600, 1200, 2400, 4800 or 9600 bits per second via a standard EIA RS-232-C or optional 20mA current loop interface. Parity is selectable for space, mark, even, or odd. The number of stop bits, treatment of the parity bit and transmission rate is determined during configuration which may be controlled through the host or via the keyboard. ➤

## Perkin-Elmer Super Owl 1250 Display Terminal

- ▷ Asynchronous ASCII transmission is provided at selectable speeds of 110 to 9600 bits per second in half- or full-duplex mode.

Additional Super Owl 1250 features include:

- Ability to configure the 1250 through its non-volatile EAROM (Electronically Alterable Read Only Memory).
- Descenders on lower case letters for easy reading.
- Full set of video attributes for maximum highlighting.
- Forms drawing character set for depiction of familiar business forms.
- "Request to Send" Block Mode Transmission which eliminates the need to reserve 2KB of host main memory for each CRT.
- Truly programmable function keys which eliminate the host time required to decode the usual fixed-message keys and issue the program calls. The function keys may be reprogrammed by the operator or by the host.
- "Read Modified Only" capability—by line, by message, or by page—reduces host time needed to determine what data the operator entered or changed.
- Control Protection (requires the simultaneous depression of the Control Key) or Lock Out provisions on various groups of keys prevent "accidental" key depressions.
- Self test programs.
- "Read Status" transmission so that the host can detect if the keyboard is locked, optional printer is busy, parity error has occurred, etc.
- "Transparent" debugging mode, in which the 1250 displays all the characters it receives, including control characters. □

- ▶ The 1250 transmits data via Bell modem types 103J, 113D, 212A or equivalent; via an acoustic coupler; or via direct connection to the host using an RS-232-C interface.

Multidrop polling using Perkin-Elmer protocol is standard, with polling characters operator selectable. This requires an external modem splitter for connection of additional terminals. Block mode terminator characters are operator selectable at up to eight each line or page.

### DEVICE CONTROL

The operational functions of the Super Owl 1250 are dependent upon the various modes of operation including Communications Mode, Configuration Mode, Program Mode, Transparent Mode and Edit Mode. Although these modes are mutually exclusive, the 1250 may function within several modes concurrently.

Within the Communications Mode, the Conversational Mode enables the terminal to transmit and receive data character-by-character in the same manner as a teletype. The Block Mode permits a full page of data to be entered in display memory, be edited, and then transmitted to the host. The Request to Send is a special application of Block Mode which allows the system designer to fully optimize the allocation of host time and memory.

In the Local Mode, no data is transmitted or received over the line. The display memory stores and displays all keyed displayable characters.

In the Edit Mode certain Function keys take on the Edit Mode operations upon depression. For example, the operator performs editing functions as well as the following: enters configuration mode, program mode, or transparent mode; places the terminal alternately on-line or off-line; places the 1250 alternately in Block or Conversation Modes; enables or disables the upper case, auto line feed, new line, and scroll feature; performs various clear data functions; and transmits data to a printer.

The operation of the Super Owl 1250 is determined by entries made via the keyboard or the host while the terminal is in the Configuration Mode. Configuration by the host is performed through a series of escape sequences and encoded data transmission. The operator can configure the terminal via the keyboard. A master menu to be followed by the operator is displayed on the screen. The configuration of the 1250 takes into account the Mode Control options, Systems options, Communications options, Keyboard option, Printer Port options, Communication Terminator Definitions, and Function Key Definitions.

The Program Mode enables the programmer to create fields on the display. Forms facsimile can be created by arranging and organizing display data in fields, making data transfer and display easier for the operator. Fields are designated by attribute characters which define the start of the next field and the end of the previous field. The various types of fields include numeric blinking, reverse video, half intensity, protected non-display (security), light pen detectable, or any combination of the above.

The cursor control keys; up, down, left, right, and home are located below the 1250's editing keys.

### COMPONENTS

**CRT DISPLAY:** A 12-inch diagonal CRT which displays up to 1920 characters arranged in 24 data lines of 80-characters each with an additional 25th status line. This display has an etched, anti-glare faceplate and the entire screen has a tilt range of +/-5 degrees from vertical. A full 128 ASCII character set includes control characters which are displayed in the Transparent mode and 31 form drawing graphics. All characters are formed by a 7 x 10 dot matrix. Color of the display is white phosphor with green phosphor available as an option. The display console is 17 inches high x 15 inches wide x 14 inches deep.

**STANDARD KEYBOARD:** A typewriter style keyboard of 82 keys including five cursor control keys and 12 function keys (shiftable to 24). The function keys share 400 bytes of programmable EAROM, and all 12 transmit data but do not generate characters which are displayed. Four of the 12 keys act as function keys and the remaining eight become editing keys (unshifted) and configuration keys (shifted) in the Edit Mode. A 12-key numeric pad is embedded in the alpha section and is selected by the Numeric Mode key. For repeating strings of characters the 1250 offers a dedicated Repeat Key which operates with no delay and a Typamatic repeat capability which takes effect after one second and repeats at 15 characters per second as long as the key is held down. ▶

## Perkin-Elmer Super Owl 1250 Display Terminal

- Fixed groups of keys may be totally locked out by software or interlocked so as to require the simultaneous depression of the "Control Key". The detachable keyboard can be placed up to three feet from the display console.

**EXTENDED KEYBOARD:** A 97-key optional detachable keyboard which is the same layout as the standard keyboard with the exception of a separate dedicated numeric pad and four additional functions keys (shiftable to eight) which are located next to the keypad. These function keys are used as programmable entry to extend the convenience of the pad, for minus, enter, etc. Their characters or strings display in all communications modes but transmit only in conversational mode, not block mode. This keyboard can be equipped with six optional international character sets and a four-position key lock switch.

**LIGHT PEN:** An optional light sensitive pen which is connected to the CRT monitor. Light Pen operation allows an operator to select from various options (menu) shown on the screen and transmit this to the host. The selection and transmission is performed by pointing or pressing the Light Pen at detectable data fields displayed by the host on the screen.

**PRINTER:** The 1250 is equipped with a buffered RS-232-C serial Printer Port. The transmission rates are selectable by the operator independently of communications port transmission rates. Almost any serial RS-232-C printer can be used with the 1250. The Super Owl may also be configured with the accessory Perkin-Elmer Model 650 CRT Page Printer. The 650 is a thermal printer that prints 24 lines of 80 characters each on 8½ by 11-inch paper at a nominal rate of 100 characters per second.

### PRICING

The Super Owl 1250 is available for purchase only. A separate maintenance contract and quantity discounts are provided.

Perkin-Elmer offers three service plans: Extended Warranty, Full Service, and Fixed Price Depot Repair. Extended Warranty extends the warranty on parts and labor from 90 days to one year; defective terminals are returned to the factory or repair depot for repair. Full service provides on-site maintenance. Fixed Price Depot Repair is intended for customers that provide their own maintenance personnel. Faulty components are returned to the factory, and the customer is billed a fixed charge according to the cost of the repair.

	<u>List Price</u>	<u>OEM Price*</u>
Model 1250 Super Owl editing CRT terminal	\$1695	\$1153
Standard keyboard with 12 shiftable to 24 function keys	295	201
Extended keyboard, detachable, with 16 shiftable to 32 function keys	390	265
Extended keyboard as above, except also including a four-position locking keyswitch	440	299
Light pen for selecting displayed fields from "menu" and causing transmission to the host	470	320
Light pen support. Required if the light pen device T85-240 is ordered	25	14
RS-232-C cable for modem/computer port or printer port	40	27
Green phosphor etched antiglare CRT	50	34
International character generators; French, Swedish, Danish/Norwegian, German, United Kingdom, or Spanish	100	68
International keyboard capability	n/c	n/c

\*For quantities of 100 to 249 units.■



# Perkin-Elmer Series 1000 Display Terminals



## MANAGEMENT SUMMARY

Perkin-Elmer Data Systems was formed in August 1976 as one of five subsidiaries of the parent company, Perkin-Elmer, which dates to the late 1930's. P-E Data Systems includes three divisions: Interdata, Wangco (acquired in mid-1976), and the Terminals Division, which was formed at the same time as Data Systems. Interdata, of course, is well known as a prominent minicomputer manufacturer.

P-E Data Systems introduced the Fox-1100 and the Owl-1200 in January 1977, as low-cost, Teletype-compatible display terminals. Both terminals are microprocessor-based (Motorola 6800) and are identical in appearance, but the Owl-1200 provides a variety of additional features.

The terminals are available with a buffered printer interface and feature a 1920-character display screen. Other prominent features include the display of upper and lower case alphabets, a transparency mode that displays the full 128-character ASCII character set including control codes, and selectable transmission rates up to 9600 bps. The terminals are the first display terminals introduced by the newly-formed Data Systems, which also manufactures the familiar Carousel printer.

Salient features of the Fox 1100 include:

- Tabulation.
- Scroll.
- Addressable cursor.
- Local print.
- Automatic line feed.
- New Line.
- Upper-case lock.
- Answerback (optional).
- Numeric keypad (optional).
- Fully-buffered printer interface (optional).

A pair of low-cost, Teletype-compatible keyboard/display terminals.

Standard features include cursor addressing and sensing, selectable transmission rates from 75 to 9600 bps, scroll, tabbing, auto line-feed, transparency, editing, format protection, highlighting, etc. Options include line drawing, a buffered printer interface, multidrop operation, answerback, program function keys, and a numeric pad.

The stand-alone terminals are available on a purchase basis only. Unit quantity prices are \$1,995 and \$1,295 for the basic units. Quantity discounts are provided.

## CHARACTERISTICS

**VENDOR:** Perkin-Elmer Data Systems, Terminals Division, Route 10 and Emery Avenue, Randolph, New Jersey 07801. Telephone (201) 366-5550.

**DATE OF ANNOUNCEMENT:** January 1977.

**DATE OF FIRST DELIVERY:** Fox-1100—January 1977; Owl-1200—March 1977.

**NUMBER DELIVERED TO DATE:** Over 100.

**SERVICED BY:** Perkin-Elmer Data Systems.

## MODELS

The Fox-1100 and the Owl-1200, both microprocessor-based, are Teletype-compatible display terminals. Both models are stand-alone units that feature a pedestal-mounted, fixed-position display monitor with an integral keyboard located in the pedestal base. A fully-buffered RS-232C/CCITT V.24 or 20 ma dc printer interface is optional.

## TRANSMISSION SPECIFICATIONS

Asynchronous in the half- or full-duplex mode at 75, 110, 200, 300, 600, 1200, 1800, 2400, 4800, 7200, or 9600 bits/second. Parity is selectable for odd, even, mark ("1") or space ("0"). The 10- or 11-unit, 8-level ASCII code is used. The terminal is equipped with an RS-232C/CCITT V.24 interface; a 20 ma dc current loop interface is optional. The Answerback option, available for both models, stores and transmits a predetermined station identification message of up to 32 characters in response to a keyed "Here Is" or receive WRU code.

Owl-1200 options include multipoint operation and a Bell System 202/212 modem interface.

## DEVICE CONTROL

**FOX-1100:** Transmission is performed on a character-by-character basis as each key is depressed. The cursor is addressable. The cursor can also be positioned via Line Feed, Carriage Return, Space, Backspace, and Tab func-

## Perkin-Elmer Series 1000 Display Terminals

➤ Salient features of the Owl 1200 include:

- Tabulation.
- Scroll.
- Cursor addressing/sensing.
- Individual cursor control keys.
- Format protection.
- A concurrent print and receive feature.
- Numeric keypad.
- 16 Program Function keys (optional).
- Answerback (optional).
- Automatic line feed.
- New Line.
- Upper case lock.
- Multipoint operation (optional).
- Fully-buffered printer interface (optional).
- Line drawing (optional).

The Fox-1100 is intended to compete favorably with low-cost Teletype-compatible display terminals, specifically the Lear Siegler ADM-3, ADDS Consul 520, and DEC VT-52. The Owl-1200 is intended to compete favorably with the Lear Siegler ADM-1A and ADM-2, the ADDS Consul 980, and the Hazeltine Mod 1.

P-E Data Systems provides its own service through 30 major cities nationwide and through its worldwide subsidiaries. □

➤ **tions.** Both Tab and Backtab functions are provided. Tab stops can be set in any of the 80 columns. The Scroll mode, when enabled, moves all displayed data up by one line as each new line is entered. New Line, when enabled, moves the cursor to the beginning of the next line when a New Line control character is detected. Auto Line Feed, when enabled, causes an automatic line feed with each carriage return.

Transparent mode provides a communications monitoring capability. In this mode, all control character sequences are ignored and all control characters are displayed.

The terminal also provides a local print function; when keyed, the displayed data is printed.

**OWL-1200:** Transmission is performed in a block mode. A line, page, or message can be transmitted. The cursor is addressable, and its position can be sensed. Full cursor controls are provided that position the cursor up, down, left, right, or home.

Edit functions provide character or line insertion and deletion, screen erasure, line or field erasure, or erasure of all unprotected fields.

Format protection is standard. Inadvertent entry into protected fields is prevented. Tabbing backward or forward moves the cursor between unprotected fields. Auto Tab Enable moves the cursor to the beginning of the next field when a field is filled. Attribute codes define protected fields, fields designated for numeric entry only, non-displayed fields (for security purposes), and highlighted fields. Highlighting includes half intensity display, blinking, and reverse video. Any combination of attribute codes can define a field. Field Attribute codes can be keyed in the Program mode.

Tab functions include Tab Set and Clear, Tab and Backtab.

Transmit functions can be programmed to transmit all data, transmit all unprotected fields, transmit operator-modified data only, or transmit a Request-to-Send header.

Received commands can request terminal status information including parity or printer error, printer busy, keyboard locked, command error, mode settings (Upper Case Lock, Auto Line Feed, Scroll, Parity definitions, and Send mode), and communication strap settings.

Transparent mode ignores all control code sequences and displays all data including control characters. This mode can be used for program debugging or to transmit control sequences to a device attached to the printer interface.

The local print function prints a line or complete page as selected. In the "Simulprint" mode, displayed data is printed concurrently with the reception of data from the host computer.

The optional Program Function keys transmit a "Request-to-Send" header followed by the "AID" identification code of the depressed key. A total of 32 functions can be program-defined.

Mode Control functions are the same as those for the Fox-1100, and include Scroll, New Line, Upper-Case Lock, Auto Line Feed, Break, "Here Is", and Reset.

### COMPONENTS

**CRT DISPLAY UNIT:** A 12-inch (diagonal measurement) CRT, which displays up to 1920 characters arranged in 24 lines of 80 characters each. The character set features 96 displayable symbols including upper and lower case alphabets, numerics, and specials. A total of 128 ASCII symbols, including symbols that represent the ASCII control codes, are displayed in the Transparency mode. Each character is formed via a 9-by-12 dot matrix to allow for lower-case descenders. An optional 32-character line-drawing set is available for duplicating source forms. Data is displayed in white. Highlighting features include full and half intensity, reverse video, and blinking. The cursor is displayed in reverse video as a block; blinking is optional.

**FOX-1100 KEYBOARD:** A 52-key, typewriter-style integral keyboard. The keyboard also features an optional 12-key numeric pad (including comma and period) to the right of the main keygroup and an 8-key Model keypad to its left. Key functions include Line Feed, Carriage Return, Space, Backspace, Tab, Repeat, Clear, Print, and Multi-Code (optional). The Mode Control keypad includes Scroll Enable, New Line Enable, Auto Line Feed, Local, Upper-Case Lock, Break, Reset, and "Here Is" functions. The keyboard generates all 128 ASCII character codes, and features "Typamatic" action; i.e., character repeat occurs at 15 cps while a key remains depressed.

**OWL-1200 KEYBOARD:** A 62-key, typewriter-style integral keyboard. The keyboard also features a 12-key numeric pad (including comma and period), a 12-key cursor-control keypad (both located to the right of the main keyboard), an 8-key Mode Control keypad, two optional 8-key clusters of 16 Program Function keys, and an 8-key cluster of Edit control keys. The four 8-key clusters (Mode Control, Program Function, and Edit keys) are located directly over the main keygroup and numeric/cursor control keypads, in sequence from left to right. Key functions of the main keygroup include Line



## Perkin-Elmer Series 1000 Display Terminals

► **Feed, Carriage Return, Space, Backspace, Tab, Escape, Repeat, Clear, Print, Shift, Shift Lock, and Control Shift.** The Mode Control cluster includes Scroll Enable, New Line Enable, Auto Line Feed, Reset, Upper Case Lock, "Here Is", Local, and Break. The Edit cluster includes Character Insert and Delete, Line Insert and Delete, Clear All, Clear Non-Protected, and Clear Line/Field. The keyboard generates any of 128 ASCII character codes, and features "Typamatic" action, i.e. the character is repeated at 15 cps while a key is depressed.

### PRICING

The Fox-1100 and Owl-1200 display terminals are available for purchase only. A separate maintenance contract and quantity discounts are provided.

P-E Data Systems offers three service plans: Extended Warranty, Full Service, and Fixed Price Depot Repair. Extended Warranty extends the warranty on parts and labor from 90 days to one year; defective terminals are returned to the factory or repair depot for repair. Full service provides on-site maintenance. Fixed Price Depot Repair is intended for customers that provide their own maintenance personnel. Faulty components are returned to the factory, and the customer is billed a fixed charge according to the cost of repair.

Installation charges vary according to the number of terminals installed at the same location. Installation charges are:

- 1 to 3 terminals—\$75/terminal.
- 4 to 9 terminals—\$60/terminal.
- 10 or more terminals—\$40/terminal.

	<u>Unit Purchase</u>	<u>Quantity Purchase*</u>	<u>Monthly Maintenance**</u>
Fox-1100	\$1,295	\$971	\$15
Owl-1200	1,995	1,496	24

\*For quantities of 25 to 99 units.

\*\*Full service plan.

### Fox-1100 Options

	<u>Purchase Price***</u>
Blinking cursor	\$15
Multicode	25
Answerback	50
Numeric pad	95
Buffered Printer Interface	95

### Owl-1200 Options

Blinking Cursor	15
Multicode	25
Answerback	50
Program Function Keys (16 keys)	95
Line Drawing Set	95
Multipoint Operation	95
202/212 Modem Interface	50
Buffered Printer Interface	95

\*\*\*Single unit quantity.■

